Trans Mountain Pipeline ULC
Trans Mountain Expansion Project
NEB Hearing Order OH-001-2014
Responses to Information Request from
City of Victoria

2.1 Project Need/Public Interest

References:

i. Volume 2 - Project Overview, Economics and General Information (Section 3.1.2 – Page 2-37)

ii. City of Victoria Kinder Morgan Trans Mountain Pipeline Expansion Proposal Engagement Summary Report (attached)

Preamble:

In reference (i), Trans Mountain states that:

- the marketplace has clearly demonstrated the need for the Project, and
- the Project is required from a broader public interest perspective to ensure that producers and governments obtain the highest value for their petroleum resources.

Canadians are the ultimate owners of petroleum resources as represented through their provincial governments. Reference (ii) includes the results of public engagement activities conducted by the City of Victoria to solicit input on the project from interested members of the public. A number of respondents questioned the need for the Project and how the Project is consistent with the public interest, based on:

- concerns regarding climate change and a required shift to alternative energy sources, and
- concerns regarding the export of Canada's natural resources.

In light of these concerns, it is important to know the factors that were considered by Trans Mountain in coming to its conclusions that the Project is needed and in the public interest.

Request:

a) In coming to the conclusion that there is a need for the Project, did Trans Mountain give consideration to any factors other than the demand for transportation services and market for petroleum resources? If yes, please describe those factors.

b) In coming to the conclusion that the Project is required from a broader public interest perspective, did Trans Mountain give consideration to any factors other than ensuring the highest value is obtained for petroleum resources? If yes, please describe those factors.

Response:

a) Trans Mountain believes the Project is required from a broader public interest perspective, which includes other factors besides the market requirements. The term "public interest" is defined in the NEB's strategic plan as follows: "The public interest is inclusive of all Canadians and refers to a balance of economic, environmental and social considerations that changes as society's values and preferences evolve over time."

The public interest includes many factors, including: a requirement to build and operate the project in a manner that respects the integrity of the environment, the safety of the public and of employees, and the rights of landowners affected by the project; socio-economic factors such as the overall jobs created and Trans Mountain's contributions to the communities in which it operates; respecting treaty rights of First Nations; and, the overall economic and fiscal benefits to the Canadian, provincial and local economy economies. Trans Mountain believes the Project should be found to be in the public interest when viewed from an overall perspective that includes these factors, and that the application provides compelling evidence to support this opinion.

Public interest considerations were also addressed in the responses to Allan R IR No. 1.01.1a, 1.01.1h and 1.01.1x (Filing ID A3X5V9).

b) Please refer to the response to City of Victoria IR No. 2.1a.

2.2 Project Benefits

References:

i. Volume 2 - Project Overview, Economics and General Information (Page 2-41)

ii. City of Victoria Kinder Morgan Trans Mountain Pipeline Expansion Proposal Engagement Summary Report (attached)

Preamble:

In reference (i), Trans Mountain states that:

- the construction and operation of the Project will provide substantial economic and fiscal benefits to Canada and its regions. There will be significant benefits to the parties directly involved, to all Western Canadian oil producers, and to all Canadians and their governments, and
- in addition to the tax benefits created at the federal and provincial levels, the Project will also yield benefits to communities along the right-of-way through employment and economic activity, and generating additional property taxes for the life of the pipeline.

Reference (ii) includes the results of engagement activities conducted by the City of Victoria to solicit input on the Project from the public. A number of engagement participants questioned the benefits of the Project to Victoria, the region and the province. Others asked whether Trans Mountain was willing to make additional investments that will be of benefit to the Victoria community in recognition of the risk posed by the increase in tanker traffic.

Request:

a) Please provide information regarding the specific benefits that businesses and residents of the City of Victoria and the Capital Regional District could expect from construction and operation of the Project.

b) Is Trans Mountain planning any initiatives in the City of Victoria or the Capital Regional District that will confer any additional community benefits?

Response:

a) The economic and fiscal benefits study by the Conference Board of Canada commissioned by Trans Mountain on the Project did not specifically consider the City of Victoria or the Capital Regional District (CRD). However, among pipeline communities, it did consider broadly economic impacts that would be experienced across the province, including the Capital Regional District. As a region that contributes to and is a part of the overall provincial economy, it is reasonable to expect there are benefits resulting from increased provincial revenues and economic activity that are brought about by the TMEP. TMEP has estimated economic benefits to the Province of British Columbia of:

- The development (construction) period is forecasted to boost Canadian Gross Domestic Product (GDP) by approximately $4.9 billion (in constant 2012 dollars), with $2.8 billion accruing to BC.
- There will be a total of 58,000 person-years of employment generated across Canada during development, with approximately 36,000 in BC.
- There will be $646 million in federal taxes generated during the project development phase and an additional $568 million of provincial taxes, with $309 million received by BC and $168 million by Alberta.
- There will be an overall boost to employment of 50,000 to 65,000 person-years during the first 20 years of operations, with 60 per cent of the jobs being created in BC.
- The operations phase will boost Canadian GDP by at least $13.3 billion over the first 20 years. BC will see the largest impact with a boost of about $8.5 billion.
- The Project will generate about $1.4 billion in additional tax revenues for the federal government during the operations phase and an additional $1.1 billion in provincial taxes, with BC receiving about $727.

It can be expected that within the CRD, there will vendors and jobs seekers who will be looking for procurement or employment opportunities during the construction of the Project.

Engagement to date on Vancouver Island has shown interest by resident skilled trades and vendors, and interest in being made aware of potential procurement opportunities during construction. Additionally, there will be similar groups or individuals who will be looking to be involved in any associated upstream development resulting from the increased pipeline capacity to new markets. It is understood from shippers and producers that there are a significant number of individuals who are employed by oil sand operators who are residents and community members of coastal communities in BC, including Victoria.

As a result of recommendations for increased spill response capacity made by Trans Mountain in Volume 8A (Filing ID A56025), there will be an investment by the Western Canadian Marine Response Corporation (WCMRC) in the Capital Regional District towards new employment and infrastructure. This investment is funded significantly from increased marine volume shipments at the Westridge Marine Terminal through the Trans Mountain Pipeline. Current forecasts of the total investment toward enhanced spill response capacity in the Salish Sea by WCMRC is up to $100 million in initial capital spending and 100 on-going full-time equivalent positions.

Also refer to Section 3.4.1 of Volume 2 (Filing ID A55987) and Section 5.5.2 of Volume 8A (Filing ID A56025).

b) Trans Mountain is considering a Coastal Community Benefit program that will require further consultation with local governments. Initial design of the program is considering the purchase of additional spill response equipment for select coastal communities, in coordination with Western Canadian Marine Response Corporation (WCMRC), which will be above and beyond federally mandated spill response capacity, WCMRC response planning standards, or the proposed enhanced spill response capacity by Trans Mountain in Volume 8A (Filing IDs A3S4X3 and A3S4X4). The proposed program requires further consultation with WCMRC and coastal communities prior to any initiative undertaking.

Refer to Section 5.2.2 of Volume 8A (Filing ID A3S4Y3)

Summary of New Commitments:

- Consult with coastal communities on a community benefits program focussed on marine spill response.

2.3 Impacts of Increased Tanker Traffic on Whales

References:

i. City of Victoria Kinder Morgan Trans Mountain Pipeline Expansion Proposal Engagement Summary Report (attached)

ii. Volume 8A - Marine Transportation (Section 4.3.7, Page 8A-296 to 8A-332)

iii. Volume 8A - Marine Transportation (Section 4.4.5, Page 8A-470 to 8A-481)

iv. Volume 8A - Marine Transportation (Section 1.4.2.11, Page 8A-52 to 8A-54)

v. Volume 8A - Marine Transportation (Section 5.3.2.1 -page 8A-530 and Figures 5.3.1 and 5.3.2)

Preamble:

Reference (i) includes the results of engagement activities conducted by the City of Victoria to solicit input on the Project from the public. A number of engagement participants were concerned about the impact of the Project on whale populations.

In references (ii) and (iii), Trans Mountain states that the residual and cumulative effects of increased project-related marine vessel traffic on Southern Resident Killer Whales are significant because of sensory disturbance due to underwater noise. However, Trans Mountain proposes no direct mitigation for these effects because project-related marine vessels are owned and operated by third parties.

In reference (iv), Trans Mountain states that it maintains a Tanker Acceptance Standard, which governs the acceptance or rejection of all tankers calling at the Westridge Marine Terminal. It would appear that Trans Mountain has the ability under this Standard to incorporate either a requirement that tankers meet a minimum acoustic standard or have in place noise-quieting techniques that could mitigate the impact of tanker traffic on whale populations.

Request:

a) Is Trans Mountain aware of any noise-quieting techniques or adaptations that could reduce underwater noise from project-related marine traffic and the resulting sensory disturbance to Southern Resident Killer Whale populations?

b) Could Trans Mountain require that tankers calling at the Westridge Marine Terminal have underwater noise-quieting techniques or adaptations in place as part of its Tanker Acceptance Standard?

c) Could Trans Mountain require that tankers calling at the Westridge Marine Terminal meet a minimum acoustic standard as part of its Tanker Acceptance Standard?

d) Could Trans Mountain require that project-related tugs have noise-quieting techniques or adaptations in place?

e) Could Trans Mountain require that project-related tugs meet a minimum acoustic standard?

Response:

a) Technical design and operating practice guidelines that could reduce underwater noise have recently been described by the International Maritime Organization (IMO 2014). The guidance indicates that propeller and hull design may be improved and adapted to reduce underwater noise. Consideration should also be given to onboard machinery selection. The IMO acknowledges that the largest opportunities for reducing underwater noise will be during the initial design of the ship. For existing ships, it is unlikely to be practical to meet the underwater noise performance that is achievable by new designs. Certain technologies are known to contribute to noise reduction for existing ships but these entail considerable retro-fitting.

Although the primary mechanism for reducing underwater noise is through design and production of quieter ships, operational modifications and maintenance measures could also be of benefit. These include maintenance of the underwater components of the vessel (e.g., ensuring the propeller is free of nicks) as well as operational considerations, such as speed. In general, for ships equipped with fixed pitch propellers, reducing ship speed can be a very effective operational measure for reducing underwater noise.

Reference:

International Maritime Organization. 2014. Guidelines for the Reduction of Underwater Noise from Commercial Shipping to Address Adverse Impacts on Marine Life. IMO MEPC.1/Circ.833.

b) While Trans Mountain's vessel acceptance process provides a means to screen vessels for suitability there are currently no accepted standards for underwater noise quieting techniques or adaptations that could be implemented as the basis of a screening criteria. Similarly, due to the absence of standardized criteria there are no published performance rankings for vessels against which to screen for their acceptance. As such it is not practical for Trans Mountain to implement acoustic criteria for tankers or tugs in its vessel acceptance process at this time.

Sensory disturbance caused by underwater noise from vessel traffic, including tankers and tugs, is a concern for the maritime industry as a whole.

Port Metro Vancouver (PMV) is engaged in working collaboratively with regulators and industry to develop future guidelines or standards for reducing underwater noise from commercial vessels in local waters. Once such guidelines are available, Trans Mountain shall require Project tankers to adopt those as best practice as part of its Tanker Acceptance Standards.

PMV has established the Enhancing Cetacean Habitat and Observation (ECHO) Program in collaboration with government agencies, First Nations, marine industry users, non-government organizations and scientific experts, to better understand and manage the potential impacts to cetaceans from commercial vessel activities in BC

coastal waters. In addition, PMV participates in Green Marine, a voluntary environmental program for the maritime industry to reduce its environmental footprint. Trans Mountain is participating in both initiatives and continues to raise awareness of such initiatives with its shippers and carriers, with the aim to promote the selection and nomination of modern and efficient vessels operated to current best practices and meeting all local and international regulations.

c) Refer to the response to b) above. At present there are no published acoustic standards.

d) Tugs utilised by tankers calling at the Westridge Marine Terminal currently and in future will not be dedicated to the Project. Trans Mountain is not aware of any published standards for hull and propulsion generated noise for tugs. As such, Trans Mountain does not believe that the Tanker Acceptance Standard is the best means to regulate the local tug industry. Trans Mountain is supportive of industry initiatives such as PMV's ECHO Program and Green Marine and expects that tug operators serving PMV will adopt the outcome of such initiatives.

Also refer to the response to b) above.

e) Refer to the responses to b) and d) above. Tug designers and operators recognise that noise is lost energy and normally strive to achieve a quiet tug in order to ensure higher efficiencies. It should be noted that full power is seldom necessary during normal harbour assistance and escort, and the tug operates at full power only for extremely small intervals of time during trials and drills.

2.4 Marine Accident and Oil Spill Risk and Mitigation

2.4.1 Pilotage Requirements

Reference:

Volume 8A - Marine Transportation (Section 1.4.2.3- page 8A-46 and BA-47)

Preamble:

Trans Mountain indicates that laden tankers leaving the Westridge Marine Terminal are required to have two pilots to guide navigation on the return trip to the Pacific Ocean. The two pilots disembark from the tanker at the Victoria pilot station at Brotchie Ledge.

Request:

Could marine collision and oil spill risk be further mitigated by moving the pilot disembarkation point, from south of Victoria, to a zone west of Race Rocks, stationed from Sooke, for laden oil tankers?

Response:

Yes. Trans Mountain's TERMPOL submission proposed moving the pilot disembarkation point to a location west of Race Rocks (Filing ID A3S4T7, https://docs.neb-one.gc.ca/ll-eng/llisapi.dll/open/2393619). The recently issued TERMPOL Report has accepted that proposal and the TERMPOL Review Committee supports extending the pilot disembarkation zone and tethered tug escort requirements for Project tankers to an area in the vicinity of Race Rocks, weather permitting and subject to the requirements of a future Pacific Pilotage Authority "Notice to Industry".

2.4.2 Tug escorts

References:

i. Volume 8A- Marine Transportation (Section 5.3.2.1 -page BA-530 and Figures 5.3.1 and 5.3.2)

ii. Volume 8A - Marine Transportation (Section 5.3.1 - page BA-527)

iii. TR 8C-12 TERMPOL S.3 "An Evaluation of Local Escort and Rescue Tug Capabilities in Juan de Fuca Strait"

Preamble:

In reference (i), Trans Mountain describes and illustrates the existing tug escort requirements for laden tankers, which include a tethered tug to Brotchie Ledge and an untethered tug escort to Race Rocks. Trans Mountain proposes an expansion of the untethered tug escort route through the Juan de Fuca Strait to the Pacific Ocean.

In reference (ii), Trans Mountain states that a tethered tug is physically attached to the tanker and can exert enough force to prevent the oil tanker from grounding in the event of a mechanical failure of the oil tanker's equipment. Untethered escort tugs navigate with the outbound tanker but are not physically attached to it. In the event the oil tanker experiences a mechanical failure, an untethered escort tug can connect a line and exert enough force to prevent the tanker from grounding but the response time is greater.

In reference (i), Trans Mountain indicates that tug operators based in Vancouver have indicated that escort tugs with sufficient capability to control a laden oil tanker under conditions prevailing in the study area are now and will continue to be available for this service. The evaluation cited in reference (iii) recommends minimum criteria for escort tugs and concludes that there are only six BC-based tugs which have a clearly definable escort capability. These six tugs are already part of the existing escort tug regime, escorting laden tankers from Westridge Terminal to Race Rocks. These conclusions raise concerns about the availability of suitable tug escort vessels to support both the proposed increase in tanker traffic and the proposed increase in tug escort requirements.

Request:

a) Would the risk of a marine oil spill be further mitigated by extending the tethered tug route either to Race Rocks or all the way through Juan de Fuca Strait to the Pacific Ocean?

b) Please indicate whether the escort tugs that will be used to escort tankers as proposed in Trans Mountain's application will meet the minimum criteria recommended in reference (iii).

c) Please provide further information regarding any steps that Trans Mountain is taking, or plans to take, to ensure that adequate tug resources are available to meet the proposed tug escort requirements.

Response:

a) Trans Mountain's TERMPOL submission proposed moving the pilot disembarkation point to a location west of Race Rocks (Filing ID A34T7). The recently issued TERMPOL Report has accepted that proposal and the TERMPOL Review Committee supports extending the pilot disembarkation zone and tethered tug escort requirements for Project tankers to an area in the vicinity of Race Rocks, weather permitting and subject to the requirements of a future Pacific Pilotage Authority "Notice to Industry".

b) Yes. Refer to the responses to NEB IR No. 1.59a (Filing ID A3W9J8) and NEB IR No. 1.59b (Filing ID A3W9K0) for more details.

c) Trans Mountain has been provided written assurance by local tug operators that adequate tug resources are available to meet the proposed escort requirements (Filing ID A3W9J9). Refer to the responses to NEB IR No. 1.59a (Filing ID A3W9J8) and NEB IR No. 1.59b (Filing ID A3W9K0) for details regarding the provision of escort tugs by local operators and Trans Mountain's commitment to develop a tug matrix to ensure the adequacy of these escort tugs.

2.4.3 Moving Safety Zone

Reference:

Volume 8A - Marine Transportation (Section 5.3.2.2- page 8A-532 and 8A-533)

Preamble

Trans Mountain proposes that a Moving Safety Zone be established around all laden oil tankers to substantially reduce the probability of a vessel collision but provides few details regarding how a Moving Safety Zone would be implemented and monitored. In addition to vessel traffic, Victoria also has a significant amount of air traffic entering and exiting the Victoria Harbour Airport.

Request:

a) Please provide more information regarding how the proposed Moving Safety Zone would be implemented and enforced.

b) Would the Moving Safety Zone also apply to aircraft or are there other restrictions already in place limiting how close an aircraft can come to a project-related tanker?

Response:

a) The TERMPOL Review Committee (TRC) did not endorse the proposed Moving Safety Zone (MSZ), but instead, in its report, the TRC endorsed the following enhanced risk control recommendations for in-transit laden tankers (Filing ID A4F8Z4):

- Extended use of tethered and untethered tug escort; as shown in figures 1 and 2 below. (Recommendations 8, 9, 10 and Finding 17);
- Extension of the pilot disembarkation zone (Finding 18);
- Guidance on communication between masters and watch keeping personnel to support strong communication between tankers and their escort tugs; (Findings 21);
- Clear guidance to industry on enhancements to the marine safety regime that will impact their operations; (Findings 19, 20, 21, 22); and
- An engagement and awareness strategy to promote safe navigation and interaction between Project tankers and recreational boaters, fishing vessel operators, and operators of small vessels (Finding 20).

While the MSZ was proposed as a new regulation requiring additional separation of Project tankers from other vessels, realization of its benefits would have largely depended upon activities which can typically be achieved without new regulation for additional separation. In fact, such activities have been endorsed by the TRC in their recommendations and findings and supported by Trans Mountain (refer to the response to NEB IR TERMPOL Report and Outstanding Filings No. Aa, Filing ID A4G3U5). Such activities are:

- Sécurité broadcasts at regular intervals by the laden tanker;

- Expanding application of the Automated Information System to smaller vessels;
- Encourage the use of radar reflectors by smaller vessels;
- Public education on application of ColRegs and marine safety to be led by the Pacific Pilotage Authority; and
- Notice to Industry on use and positioning of tugs in relation to the tanker in transit to aid in highlighting it and thereby enhancing situational awareness of all mariners.

The above activities are in addition to existing regulations including the ColRegs, Pilotage, and Vessel Traffic Services and will support enhanced situational awareness.

Also refer to the response to NEB IR TERMPOL Report and Outstanding Filings (Filing ID A4G3U5).

Reference:

TERMPOL Review Committee. 2014. TERMPOL Review Process Report on the Trans Mountain Expansion Project. Website: https://docs.neb-one.gc.ca/ll-eng/llisapi.dll/fetch/2000/90464/90552/548311/956726/2392873/2449925/2451487/2584386/C353-4-3_-_TMEP_TERMPOL_Report_December_11_2014_-_A4F8Z4.pdf?nodeid=2584073&vernum=-2. Accessed: January 2015.

b) No. Refer to response a) above.

2.5 Marine Oil Spill Fate and Behaviour

Reference:

i. Volume 8A - Marine Transportation (Section 5.2.4 - page BA-523 and Table 5.2.2)

ii Volume 8A - Marine Transportation (Section 5.4.4.7 - page 8A-565 to BA-596)

iii. Volume 8A - Marine Transportation (Section 5.6.2.1.1 - page 8A-634)

Preamble:

In reference (i), Trans Mountain indicates that seven locations along the tanker route, including one designated as location "F" (Brotchie Pilot Boarding Area) were identified as possible accident locations. Four locations were chosen for spill modelling. Location F is the possible accident location closest to the City of Victoria; however, Trans Mountain states that this location was not selected for spill modeling because a possible collision with another vessel is a low probability event.

The concept of risk is often expressed as probability multiplied by consequence. As a waterfront community with a downtown centred around an economically-vital harbour, the consequence of a marine oil spill in the waters off Victoria could be significant. This means that even if the probability of an accident is "low" at Location F, the risk to the City of Victoria and the region from an accident at this location could be "high."

Reference (ii) includes a variety of stochastic simulation maps for a spill scenario at the four chosen locations. The maps show probability of oil presence from a spill at each location at 24 and 48 hours from the time of the spill, for each of the four seasons of the year. In reference (iii), Trans Mountain acknowledges that scenario-based hydrocarbon spill evaluations can provide decision makers and resource managers with a clearer understanding of potential effects pathways, the range of potential outcomes, vulnerable resources, and spill preparedness and response priorities and capabilities. Spill modelling from location F that shows when shoreline contact could be expected after a spill would provide critical information for local emergency planning purposes.

Request:

Please provide stochastic results for a representative marine oil spill at Location F.

Response:

As noted in the Preamble, stochastic modelling was conducted for Site E (Arachne Reef), to the northeast of Victoria, and Site G, (Race Rocks), to the west of Victoria. Spills at these two sites differ considerably in their behaviour. Arachne Reef is in close proximity to islands and so a spill near this location will quickly contact shorelines, whereas spills off Race Rocks have a wide expanse of open water in Juan de Fuca Strait over which they can spread. Thus, for the same time intervals, the length of shoreline affected is much greater for a spill near Arachne Reef than for a spill near Race Rocks. Assuming no mitigation, for example, a release at Race Rocks during the summer would affect an average 114 km of shoreline; whereas a spill at Arachne

Reef with no mitigation would result in about 309 km of shoreline affected. A spill off Victoria would be midway between these two types of spills in that it has quick access to shorelines on the Victoria side, but open water on the Juan de Fuca side.

The goal of the spill simulations that were conducted for the Project was to develop an understanding of the impacts of a spill along the shipping route. The current suite of oil spill modeling has already shown that left un mitigated any oil spill in any location could, over time, impact other locations including adjacent shorelines. Trans Mountain believes that undertaking additional oil spill modeling will not provide any significantly different information, and would not contribute to further understanding of oil spill movement.

Evaluation of the local variations between various sites is more appropriately dealt with in the spill response planning that is the responsibility of Western Canada Marine Response Corporation (WCMRC), as part of their mandate to continually improve the overall oil spill response in the area along the shipping route.

WCMRC, the only spill response organisation certified by Transport Canada for the BC coast, will develop site-specific response plans, including equipment warehouse and cache locations. As part of developing site-specific response plans, WCMRC will normally require simulations be conducted for spills off Victoria, and that these spill simulations will be used as tools to evaluate and optimize spill response strategies, resources and operations. This optimizing process was discussed for Arachne Reef and Westridge Terminal in Section 5.5, Volume 8A of the Application (Filing IDs A3S4Y6 and A3S5Q3).

In light of the above discussion, Trans Mountain will not under take additional oil spill modelling at Location F.

2.6 Marine Oil Spill Response

2.6.1 Jurisdiction and Roles and Responsibilities for Oil Spill Response

Reference:

i. Volume 8A- Marine Transportation (Section 1.4.2 - pages 8A-44 to 8A-54)

ii. Volume 8A- Marine Transportation (Section 5.5.2 - page 8A-608, Table 5.5.3)

Preamble

In reference (i), Trans Mountain outlines the roles and responsibilities for navigational safety, emergency response and preparedness of various agencies, including:

- Transport Canada
- Fisheries and Oceans Canada - Canadian Coast Guard
- Pacific Pilotage Authority
- Port Metro Vancouver
- Western Canada Marine Response Corporation (WCMRC)
- Province of British Columbia
- Tanker Owners and Operators
- Pipeline Shippers, and
- Trans Mountain.

There is no section outlining the authorities or responsibilities of local governments that may be affected by a marine oil spill. City of Victoria staff with responsibility for emergency preparedness and response have indicated that there is a large gap in understanding among various stakeholders with regard to roles and responsibilities in the event of a marine oil spill.

On page 8A-50, Trans Mountain states that the province, through Ministry of Environment staff, plays a direct role with spills that threaten or impact shorelines and that WCMRC's spill response activities and planning are complementary to the BC Ministry of Environment's spill response planning. Further information would assist in clarifying the respective jurisdictional authorities and roles and responsibilities of the Ministry of Environment, WCMRC and local government emergency responders in the event of a marine oil spill that reaches the shoreline.

In reference (ii), Trans Mountain outlines proposed improvements to WCMRC's emergency response capacity and states that emergency response exercises are intended to validate response strategies and demonstrate capabilities of all those involved in a response, including government agencies and mutual aid providers. The current exercise plan does not appear to include all stakeholders, such as local governments.

Request:

a) Please provide additional information regarding the jurisdictional authority and roles and responsibilities of local governments, the Province of BC and WCMRC for responding to a marine oil spill that reaches the shoreline.

b) Who is responsible for wildlife response planning and is there a specific wildlife response plan that would be implemented in the event of a marine oil spill from a project-related tanker?

c) Will representatives from affected local governments be included in any incident command centre established by a spill response team?

d) Will representatives from the City of Victoria and other potentially-affected local governments be included in future response exercises, including orientation, training and exercise planning?

Response:

a) Marine oil spills, including oil that reaches the shoreline, will be managed by Unified Command acting within the framework of the Incident Command System (ICS). ICS is a flexible system with four Sections operating in assigned roles under the Command staff. There can be many variations of an ICS structure to suit the needs of the response, however a typical organization will be composed of the following elements:

- UNIFIED COMMAND (Federal, Provincial and Local Government; Responsible Party; Local Emergency Services, First Nations, others as required)
- OPERATIONS SECTION
- PLANNING SECTION
- LOGISTICS SECTION
- FINANCE SECTION

The British Columbia Ministry of Environment offers a detailed discussion of ICS on their website, which includes the following statement regarding the role and responsibilities of local government:

Local government has a responsibility to assess local risks, prepare emergency response plans, and to have a delivery capability commensurate with the types and level of hazard that exist in their community. When an emergency occurs, response normally begins with local government (e.g. local fire department) and a bottom up escalation takes place if resources are insufficient. Local governments may be represented within the Incident Management Structure if affected by a large, complex incident.

Trans Mountain expects that the role of local governments would be determined by the geographic extend of the incident in relation to their jurisdiction and be guided by their regulatory powers. For example local governments typically have authority to order and conduct evacuations and to close roads, redirect traffic, public transit and other transportation related infrastructure. KMC agrees with the interpretation of the federal, provincial and municipal legislation dealing with emergency programs.

Guided by objectives developed by the Unified Command, the Responsible Party (RP) in concert with the certified response organization, Western Canada Marine Response Corporation (WCMRC) will undertake shoreline cleanup activities. The basis for shoreline cleanup is the Shoreline Cleanup Assessment Technique (SCAT) that utilizes

teams of experts to go into the field to systematically categorize the shoreline and develop treatment recommendations. These treatment recommendations will take into account the soil matrix, biological factors and be unique to each particular area. In general, shoreline cleanup operations may include, but not be limited to: hand removal of stranded oil, low pressure/low temperature flushing, and natural attenuation. In all cases, a Net Environmental Benefit Analysis (NEBA) will take place to ensure the recommended treatment will yield the best result with the least disruption to the environment.

Reference:

Government of British Columbia, Ministry of Environment. No date. Spill and Environmental Emergencies. Website: http://www2.gov.bc.ca/gov/topic.page?id=0176F19C1F37444D8EA88CB6381D9FAD. Accessed: January 2015.

b) Under the enforcement oversight of the Canadian Coast Guard, the polluter, or Responsible Party (RP), is ultimately responsible for all aspects of a marine oil spill, including wildlife. Project-related tankers calling at the Westridge Marine Terminal are required to have an agreement with Western Canada Marine Response Corporation (WCMRC), the Transport Canada certified spill response organization for the navigable waters of British Columbia. A summary of WCMRC's current and future roles, responsibilities and actions can be found in the Application, Volume 8A Section 5, Table 5.5.3 (Filing ID A3S4Y6). This table also lists proposed improvements to WCMRC capacity, including their ability to manage wildlife issues resulting from oil spill in future.

Experience has shown that through the Incident Command System (ICS), the RP will engage an established rehabilitation group, such as Focus Wildlife, to address emergency wildlife issues. Wildlife response activities are permitted and supervised by the resource trustee agencies. Within the Incident Command System, this group will adapt the general wildlife response guidelines of Federal agencies (Environment Canada/Canadian Wildlife Services and Fisheries and Oceans Canada), the Provincial Government (Ministry of the Environment), and WCMRC to the specific incident to ensure impact on marine birds and wildlife is managed in a responsible manner.

c) As noted in the response to City of Victoria 2.6.1a) it is expected that local governments will participate within Unified Command acting within the framework of the Incident Command System (ICS).

d) Marine oil spill response exercises in this region are coordinated by Western Canada Marine Response Corporation (WCMRC) in their role as the sole Transport Canada certified Response Organization. WCMRC uses the Incident Command System (ICS) to enable all parties to cohesively work together under a common management system. WCMRC conducts certification exercises on Geographic Area of Response basis. These exercises utilize a defined scenario that includes notification, spill assignments, and the activation of spill management personnel. Local municipalities are invited to participate as stakeholders, observers or within an ICS section. For example, WCMRC has invited

representatives to these exercises from the Canadian Coast Guard, Environment Canada, British Columbia Ministry of Environment, Transport Canada, First Nations, local governments, Royal Canadian Mounted Police officers, health services, including ambulance services, fire services, local emergency planners and customs/border services. These exercises follow a rotation of:

- 150 Tonne on-water deployment (annual),
- 1000 Tonne Tabletop (annual),
- 2500 Tonne on-water deployment (every 2 years),
- 10,000 Tonne Tabletop (every 3 years)

The City of Victoria is encouraged to contact WCMRC to discuss engagement opportunities.

2.6.2 Equipment Staging Areas

References:

Volume 8A - Marine Transportation (Section 5.5.2 - Page 8A-61 0 to BA-611 and Figure 5.5.2)

Preamble:

Trans Mountain indicates that the Western Canada Marine Response Corporation currently has an oil spill response equipment staging area in Esquimalt. Trans Mountain proposes a number of improvements to Western Canada Marine Response Corporation's current oil spill response capacity, including the establishment of new equipment staging locations along the tanker route. One of these proposed new equipment staging locations is in Sooke. It is unclear from Trans Mountain's application whether the existing staging area in Esquimalt would be eliminated with the proposed establishment of the Sooke staging area. If the Esquimalt staging area is to be eliminated, there is also no information provided as to the impact that decision would have on oil spill response times off the coast of Victoria.

Request:

a) Please clarify whether the existing spill response equipment staging area in Esquimalt will be eliminated if the proposed new location in the Sooke area is established.

b) Please indicate the response time for emergency crews to reach:
   i. the existing Esquimalt oil spill response equipment staging area, and
   ii. the proposed new Sooke staging area

c) Please indicate the current distance from the existing Esquimalt oil spill response equipment staging area to hypothetical oil spill location F.

d) Please indicate the estimated response time to an oil spill occurring in hypothetical oil spill location F from:
   i. the existing Esquimalt oil spill response equipment staging area, and
   ii. the proposed new Sooke staging area.

Response:

a) Please note that a staging area is essentially an equipment cache while a response base is a more comprehensive facility. Meeting the enhanced response requirements for the Project will require the total number of bases for Vancouver Island and the South Coast to increase. The equipment plan calls for five new bases in addition to the existing WCMRC facility at Burnaby. WCMRC indicates two to three of the six bases will be staffed 24 hours a day. Location specific reviews are currently being undertaken to assess the opportunities offered at each proposed base area. WCMRC is a temporary tenant at DND/Esquimalt and no decision has, as yet, been made regarding the long-term plans for the Esquimalt staging area.

b) It is not possible to indicate precisely the time emergency crews will take to mobilize at either location. Proposed continuous 24/7 staffing at certain bases will impact overall

mobilization times and will help WCMRC meets its voluntary commitment to an initial spill response time within 6-hours throughout the tanker shipping route. The initial response time nominally comprises mobilization, travel and deployment.

c) The distance from the DND/Esquimalt facility to Area-F is 5.1 nautical miles.

d) Refer to response b) above.

2.7 Marine Oil Spill Cleanup

Reference:

i. Volume 8A - Marine Transportation (Section 5.6.2.5.1 - page SA-692 to SA-693)

ii. City of Victoria Kinder Morgan Trans Mountain Pipeline Expansion Proposal Engagement Summary Report (attached)

Preamble:

In reference (i), Trans Mountain summarizes the potential ecological effects and recovery of shoreline habitat in a hypothetical spill scenario and states that shoreline clean-up and assessment techniques (SCAT) would be applied to spilled oil that reached the shore, and that most of this oil would be recovered.

Reference (ii) includes the results of engagement activities conducted by the City of Victoria to solicit input on the project from the public. A number of engagement participants questioned whether an oil spill can ever be effectively cleaned up.

Request:

Is there a guideline or standard used by WCMRC in determining when a marine oil spill has been sufficiently cleaned up and their response activities can cease (e.g., a certain percentage of oil recovered)? If yes, please provide the guideline or standard.

Response:

WCMRC does not determine cleanup endpoints. As applied to a marine oil spill incident, Net Environmental Benefit Analysis (NEBA) is the guideline that weighs many factors against the cleanup endpoints established by the Unified Command (UC) under the enforcement oversight of the Canadian Coast Guard. This analysis will consider the specific treatment options appropriate to the response; the potential for successfully implementing those discrete options; the environmental trade-off attached to each technique; and, lastly, the types of treatments that can be authorized within the existing regulatory framework. The UC, through the NEBA process determines when a marine oil spill has been sufficiently cleaned up and the response activities can cease.

Although each oil spill is unique, NEBA will conceptually develop a decision flowchart to answer the questions of:

- What will be the probable outcome if no countermeasures are deployed?
- What will be the probable outcome if only conventional mechanical countermeasures are deployed?
- On a priority basis, what are the resources (environmental, social and economic) at risk if applied countermeasures prove to be inadequate?

- Can alternative countermeasures be executed successfully to augment conventional techniques?
- How long should any treatment technique continue?
- Are certain areas within the response candidates for or amenable to natural attenuation?
- Should some oil be left for remedial treatment?
- What is the regulatory process for permitting a remedial treatment?

2.8 Marine Oil Spill Liability and Compensation

Reference:

i. Volume SA- Marine Transportation (Section 1.4.1.6 - pages 8A-40 - 8A-41)

ii. City of Victoria Kinder Morgan Trans Mountain Pipeline Expansion Proposal Engagement Summary Report (attached)

iii. Exxon Valdez Oil Spill Trustee Council, "Oil Spill Facts Questions and Answers", found online at http://www.evostc.state.ak.us/index.efm?FA=facts.QA

Preamble:

In reference (i), Trans Mountain outlines the framework for handling marine liability and compensation in Canada under the *Marine Liability Act*. Trans Mountain states that in the event of an oil spill in a marine environment, funding of up to $1.3 billion is available in a tiered system to address the costs of emergency response, clean-up and compensation in the event of an oil spill from a tanker.

Reference (ii) includes the results of engagement activities conducted by the City of Victoria to solicit input on the project from the public. A number of engagement participants questioned the current liability and compensation scheme and whether it would be sufficient to cover all costs associated with a marine oil spill.

In reference (iii), the Exxon Valdez Oil Spill Trustee Council indicates that Exxon says it spent about $2.1 billion on the cleanup effort from the Exxon Valdez oil spill. The cost of clean up associated with the Exxon Valdez oil spill raises concerns regarding the sufficiency of the current liability and compensation regime in the event of a significant oil spill resulting from the Project.

Request:

a) Is it possible that costs of emergency response, clean-up and compensation associated with a marine oil spill from a Project tanker will exceed $1.3 billion?

b) If the answer to question a) is yes, who would be responsible for paying for these excess costs?

Response:

a) Yes it is possible but risk analyses would not support credible assumptions that generate such high costs. There have been no large marine oil pollution incidents in Canada and changes to tanker design, construction and operating standards have further reduced the probability of such an event from occurring. That has been further corroborated through a quantitative risk assessment undertaken by DNV (Vol 8C, Termpol 3.15 Filing ID A3S5F4). Spill costs are unknowable in advance and would depend on a number of factors associated with a spill. This makes it difficult to evaluate with precision the response, clean-up and compensation costs of an oil tanker spill. Each spill

is different and there are limitations in available baseline data, long-term forecasting methods, and estimation of factors that influence compensation.

b) Should the costs exceed the amounts available as outlined in reference (i), the Government of Canada has recently announced its intent to modify the liability and compensation regime such that in the event of a spill, there would be unlimited compensation based on a polluter pay principle. In the event that all available sources of funds have been exhausted by spill-related claims, the Government of Canada would compensate eligible claimants and then recover those costs from the marine oil transport industry through a levy.

Refer to the response to Allan R IR No. 1.21j (Filing ID A3X5V9).